

# OUTLET NOZZLE AND A METHOD FOR MANUFACTURING AN OUTLET NOZZLE

## Abstract

Method and arrangement for providing an outlet nozzle (10) for use in a liquid fuel rocket engine. The nozzle forms a body of revolution having an axis (11) of revolution and a cross section that varies in diameter along said axis. The nozzle has a wall structure having a plurality of mutually adjacent cooling channels, helically extending substantially in parallel from the inlet end (13) of the nozzle to its outlet end (14). The nozzle includes at least two longitudinally arranged sections (10a,10b,10c). A shift between a positive and a negative channel angle in the transition from one section to an adjacent section balances any roll momentum generated by friction of rocket exhausts against the nozzle wall.